REMARKS

The nonfinal Office Action of February 26, 2008, has been reviewed by the Applicants. Claims 1 and 22 have been amended. No claims are cancelled. Claims 1-9 and 11-22 remain pending. Applicants request reconsideration.

Claim 22 was rejected under 35 U.S.C. 101 as being directed to non-statutory subject matter. Applicants traverse the rejection.

Claim 22 has been amended to recite a process of using the polymer composition to form a product. Support can be found on page 11 of the specification. See MPEP § 2173.05(q). Withdrawal of the § 101 rejection is requested.

Claims 1-9 and 11-22 remain rejected under 35 U.S.C. 103(a) as allegedly being unpatentably over Imuta (U.S. Pat. Pub. 2002/0156207). Applicants traverse the rejection.

Applicants previously argued that Imuta did not disclose the use of an intercalating agent comprising a quaternary ammonium compound. Applicants also argued that Imuta discloses fillers, not nanofillers.

In the Office Action, the Examiner cited paragraphs [0090]+ of Imuta as teaching the use of fillers that have been treated with treating agents comprising quaternary ammonium salts. The Examiner cited paragraphs [0946]+ as teaching the use of treated clays. The Examiner also stated that the claims have no size limitation and that the art was not limited to fillers of a particular size.

The paragraphs cited by the Examiner do not relate to the nanofiller. Paragraphs [0090]+ discuss the identity of X, which is the polar group on the polar group-containing olefin copolymer disclosed by Imuta. The Examiner previously applied the olefin copolymer as corresponding to polyolefin (C) of the instant claims, not the nanofiller (B). See paragraph [0074] and formula (3), which shows X as a sidechain. Applicants submit this disclosure relating to the olefin copolymer cannot be read as teaching or suggesting the use of an intercalating agent for a nanofiller. Please note that the olefin copolymer is very different from dimethyl (di(hydrogenated) tallow ammonium chloride which exemplifies the intercalating agent, as described on page 13, first full paragraph.

Paragraphs [0946]+ appear to discuss a catalyst used to catalyze the polymerization of the olefin copolymer. See paragraphs [0943]-[0946], which discuss the use of clay and clay minerals as supports for the catalyst. Applicants submit that the instant claims cannot be reasonably read to encompass a combination of Imuta's olefin copolymer along with its catalyst; see MPEP § 2111. In addition, this portion of the text does not appear to discuss the use of a quaternary ammonium compound. Finally, paragraph [0945] describes particle sizes of 10-300 micrometers, which are orders of magnitude higher than the claimed nanofiller particle size.

Imuta discusses inorganic filler in paragraphs [1286]-[1294]. However, only the general term "organically-modified" is used. The type of modification and the materials used to modify the filler are not discussed. Thus, the use of an intercalating agent comprising quaternary ammonium compound is not disclosed by Imuta.

Applicants have amended independent claims 1 and 22 to recite a particle size for the nanofiller (B). Basis can be found on page 7 of the specification. The particle size significantly improves the dispersion in a polymer composition so that a homogeneous distribution is obtained. See pages 1 and 2 of the specification. In addition, the overall surface area of the filler increases with smaller particle size, thus increasing interaction with the polymer. Properties such as mechanical strength, stiffness, temperature resistance, flame retardance, and barrier properties are improved by the homogeneous distribution of the nanofiller.

According to the Examiner, it is reasonable to presume that the fillers used in the art can overlap those claimed. In response, Applicants submit that the Examiner is using an "obvious to try" argument without providing a motivation to use the claimed nanofillers. See MPEP § 2145(X)(B). Applicants note that Imuta's discussion of inorganic filler, paragraphs [1286]-[1294], do not discuss the particle size.

Applicants request withdrawal of the § 103(a) rejection based on Imuta.

CONCLUSION

For the reasons detailed above, it is respectfully submitted all claims remaining in the application (Claims 1-9 and 11-22) are now in condition for allowance. Withdrawal of the rejections and issuance of a Notice of Allowance is requested.

In the event the Examiner considers personal contact advantageous to the disposition of this case, he is hereby authorized to call Richard M. Klein, at telephone number 216-861-5582, Cleveland, OH.

If it is determined that additional fees are due, authorization is hereby given for deduction of those fees, other than the issue fees, from Deposit Account No. 06-0308.

Respectfully submitted,

FAY SHARPE LLP

August 26, 2008
Date

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CERTIFICATE OF MAILING OR TRANSMISSION	
I hereby certify that this correspondence (and any item referred to herein as being attached or enclosed) is (are) being ☐ deposited with the United States Postal Service as First Class Mail, addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date indicated below. ☒ transmitted to the USPTO by electronic transmission via EFS-Web on the date indicated below.	
	Signature: Lynda S Kalemba
Date: August 26, 2008	Name: Lynda S. Kalemba

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